Title	Selected Grants
Author(s)	
Citation	ICR annual report (2012), 19: 111-116
Issue Date	2012
URL	http://hdl.handle.net/2433/172561
Right	
Type	Others
Textversion	publisher

SELECTED GRANTS

DIVISION OF SYNTHETIC CHEMISTRY
— Organoelement Chemistry —

Tokitoh, N.
Creation of Novel Catalysts Centered on the Coordination Diversity of Heavy Typical Elements
Grants-in-Aid for Scientific Research on Innovative Area "Stimuli-responsive Chemical Species for the Creation of Functional Molecules"
28 June 2012–31 March 2017

Tokitoh, N.
Development of Pt–Silylyne Complexes and Their Application to Synergetic and Tandem Activation of Small Molecules
Grants-in-Aid for Challenging Exploratory Research
1 April 2012–31 March 2014

Tokitoh, N.
Construction of Polycyclic Aromatic Compounds Containing Heavier Group 14 Elements and Development of Their Functions by Utilizing the Features of Main Group Elements
Grants-in-Aid for Scientific Research (B)
1 April 2010–31 March 2013

Sasamori, T.
Construction of Novel d-π Conjugated Systems Containing Heavier Main Group Elements and Their Functions
Grants-in-Aid for Young Scientists (A)
1 April 2011–31 March 2014

Mizuhata, Y.
Construction of Novel Silicon–Silicon Double-Bond Compounds Bearing Alkynyl Substituents
Grants-in-Aid for Young Scientists (B)
1 April 2009–31 March 2012

Mizuhata, Y.
Synthesis of Phthalocyanine Derivatives Bearing Phosphorus Atoms as Skeletal Elements and Their Properties
Grants-in-Aid for Scientific Research on Innovative Area "π-Space"
1 April 2011–31 March 2013

Agou, T.
Bottom-up Syntheses of Electron-Deficient Aluminum Clusters and Elucidation of Their Properties
Grants-in-Aid for Scientific Research (C)
1 April 2012–31 March 2015

Kawashima, T.; Kobayashi, J.; Agou, T.
Development of Dimensionally Extended Hetero-π-conjugated Molecules
Grants-in-Aid for Scientific Research (B)
1 April 2009–31 March 2012

— Structural Organic Chemistry —

Murata, Y.
Synthesis of Tailor-made Nanocarbons and Their Application to Electronic Devices
Grants-in-Aid for Scientific Research (A)
1 April 2011–31 March 2016

Murata, Y.
Molecular Interface Science of π-Conjugated Carbon Complexes on Non-Equilibrated States
PRESTO (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 October 2012–31 March 2016

Murata, Y.
Creation and Function of Spherical π-Space Encapsulating an Active Small Molecule
Grants-in-Aid for Scientific Research on Innovative Areas "π-Space"
1 December 2008–31 March 2013

Wakamiya, A.; Murata, Y.
Development of Dye-sesitized Solor Cells Using Organic Dyes Derived from Natural Products
ALCA (Advanced Low Carbon Technology Research and Development Program), Japan Science and Technology Agency
1 October 2011–31 March 2017

Wakamiya, A.
Development of Organic Dyes Based on Fine Tuning of π-Orbitals Using DFT Calculations
PRESTO (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 October 2010–31 March 2016

Murata, M.
Synthesis of Electron-Accepting π-Systems Containing Fulvalene as a Key Structural Unit
Grant-in-Aid for Scientific Research (B)
1 April 2012–31 March 2015

— Synthetic Organic Chemistry —

Kawabata, T.
Fine Organic Synthesis Based on Catalytic Regioselective Functionalization
Grants-in-Aid for Scientific Research (A)
1 April 2009–31 March 2013

Kawabata, T.
Regioselective Molecular Transformation Based on Organocatalytic Molecular Recognition
Grants-in-Aid for Scientific Research on Innovative Area
1 October 2011–31 March 2015

Furuta, T.
Development of Regio- and Stereoselective Reactions of Polyfunctionalized Molecules by Axially Chiral Catalysts
Grants-in-Aid for Scientific Research (C)
28 April 2011–31 March 2014

Yoshimura, T.
Synthesis of Novel Amino Acids and Natural Products Derived from Amino Acids via Memory of Chirality
Grant-in-Aid for Young Scientists (B)
28 April 2011–31 March 2013

— Advanced Inorganic Synthesis —

Teranishi, T.
Development of Structure-Specific Energy-Related Functional Materials Using Heterostructured Nanoparticles
Grants-in-Aid for Scientific Research (A)
1 April 2011–31 March 2014

Teranishi, T.
Study on Correlation between Structure and Hydrogen Storing Properties of Palladium Nanoparticles
Grants-in-Aid for Challenging Exploratory Research
1 April 2012–31 March 2014

Teranishi, T.
Synthesis of Macrocyclic π-Conjugated Ligand-Protected Gold Clusters and Fabrication of Nano-Gap Single Electron Devices
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 October 2008–31 March 2014

Teranishi, T.
Establishment of Deeply Penetrating Photoacoustic Imaging Technology Based on Fucntional Probes: Design and Synthesis of Activatable Probes and Development of in Vivo Imaging Technology
Industry-Academia Collaborative R&D Programs, Japan Science and Technology Agency
1 December 2011–31 March 2017

Teranishi, T.
Synthesis of Magnetic Nanoparticles for Creating Novel Nanocomposite Magnetic Materials
Elements Strategy Intiative, Ministry of Education, Culture, Sports, Science and Technology
1 July 2012–31 March 2022

Teranishi, T.
Research on Nanoscale Phase-Controlled Nanocomposite Magnets
Mirai Kaitaku Jitsugen Project, METI
1 October 2012–31 March 2022

Sakamoto, M.
Fabrication of Nanocrystal Superstructure toward Novel Artificial Photosynthesis
PREST (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 April 2012–31 March 2015

Sakamoto, M.
Research for the Photochemical Functions of Porphyrin Face-coordinated Metal Nanoparticles
Grants-in-Aid for Young Scientists (B)
1 April 2011–31 March 2013

DIVISION OF MATERIALS CHEMISTRY
— Chemistry of Polymer Materials —

Tsujii, Y.
Development of Novel Nanosystem by Hierarchically Assembling Concentrated Polymer Brushes
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 October 2009–31 March 2015

Tsujii, Y.
Super Lubrication of Novel Nano-Brushes
Advanced Environmental Materials of Green Network of Excellence (GRENE) Program, Ministry of Education, Culture, Sports, Science and Technology
6 December 2011–31 March 2016

Tsujii, Y.
Development of High-Performance Li-ion Batteries Using High-capacity, Low-cost Oxide Electrodes
Industrial Technology Research Grant Program, NEDO
1 October 2012–31 March 2017

Ohno, K.
Development of Next-Generation MRI Contrast Agent
Industrial Technology Research Grant Program, NEDO
1 July 2009–30 June 2013

Ohno, K.
Pharmacokinetics of Well-Defined Polymer Brush-Afforded Fine Particles
Grants-in-Aid for Young Scientists (A)
1 April 2011–31 March 2014

Ohno, K.
Development of Molecular Targeted MRI Contrast Agent
A-STEP (Adaptable and Seamless Technology Transfer Program through Target-Driven R&D), Japan Society and Technology Agency
1 October 2012–30 September 2015

Sakakibara, K.
Construction of Photoresponsive Cellulosic Nanostructures via Polysaccharide-Based Hierarchic Assembly
Grants-in-Aid for Young Scientist (B)
1 April 2012–31 March 2014

— Polymer Controlled Synthesis —

Yamago, S.
Creation of Hoop-shaped π-Conjugated Molecules through the Supramolecular Chemical Approach and Elucidation of Their Properties
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 October 2010–31 March 2016

— Inorganic Photonics Materials —

Yoko, T.
Organic-inorganic Material for Biosensor Application
Grants-in-Aid for Challenging Exploratory Research
1 April 2011–31 March 2014

Tokuda, Y.
Self-organization Synthesis of Nano-tube for Biosensor Application
Grant for Basic Science Research Projects, Sumitomo Foundation
1 November 2011–31 March 2013

Masai, H.
Fabrication of Amorphous Glass Phosphor Containing ns^2-Type Emission Center
Research Institute for Production Development
1 August 2012–31 August 2013

— Nanospintronics —

Ono, T.
Development of Novel Spin Dynamics Devices
Grants-in-Aid for Scientific Research (S)
1 April 2011–31 March 2016

Chiba, D.
Nanosystem and Function Emergence
PRESTO (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 October 2010–31 March 2014

DIVISION OF BIOCHEMISTRY
— Biofunctional Design-Chemistry —

Futaki, S.
Novel Methods for Delivering Nucleic Acids Therapeutics
Strategic Japanese-Swedish Cooperative Programme on "Multidisciplinary BIO", Japan Science and Technology Agency
1 July 2009–30 June 2012

Imanishi, M.
Construction of Rhythmic Gene Expression Systems Based on the Cellular Clock
Grants-in-Aid for Scientific Research on Innovative Areas
1 April 2012–31 March 2014

Nakase, I.
Development of Mitochondria-Targeted Cell-Penetrating Peptides and Delivery of Bioactive Molecules
Grants-in-Aid for Young Scientists (B)
1 April 2011–31 March 2013

— Chemistry of Molecular Biocatalysts —

Hiratake, J.
Applications of Cellular Collagen Biosynthesis Induced by Novel γ-Glutamyl Transpeptidase (GGT) Inhibitors
A-STEP (Adaptable and Seamless Technology Transfer Program through Target-Driven R & D), Japan Society and Technology Agency
1 December 2009–31 March 2012

Hiratake, J.
Drug Development Based on Asparagine Synthetase Inhibitors
Grants-in-Aid for Scientific Research (C)
1 April 2011–31 March 2014

Koeduka, T.
Biochemical Characterization of Reductase Responsible for the Diversity of Floral Scent in Petunia
Grants-in-Aid for Scientific Research (C)
1 April 2012–31 March 2015

— Molecular Biology —

Aoyama, T.
Regulatory Mechanisms for Functional Morphologies of Plants
Bilateral Program for Joint Research between JSPS and NSFC
1 April 2012–31 March 2015

Aoyama, T.
Growth Strategy of Plants through Morphological Changes of Roots
Grants-in-Aid for Scientific Research on Innovative Area
1 April 2011–31 March 2013

Tsuge, T.
Regulatory Mechanism of Plant Morphogenesis by the Regulator of mRNA Metabolism SAP130
Grants-in-Aid for Scientific Research (C)
1 April 2010–31 March 2013

Tsuge, T.
Regulatory Mechanism of Environmental Stimuli Response that Integrates mRNA Metabolism and Protein Degradation in the Cell
Grants-in-Aid for Scientific Research on Innovative Area
1 April 2011–31 March 2013

DIVISION OF ENVIRONMENTAL CHEMISTRY
— Molecular Materials Chemistry —

Kaji, H.
Fabrication of High-Performance Polymer EL Devices Having Covalently-Bonded Interfaces
Grants-in-Aid for Scientific Research (A)
1 April 2009–31 March 2012

Goto, A.
Dual Control Living Polymerizations with Organic Catalysts
Grants-in-Aid for Young Scientists (A)
1 April 2011–31 March 2014

Goto, A.
High Performance Color Material by Living Radical Polymerization with Organic Catalysts
A-STEP (Adaptable and Seamless Technology Transfer Program through Target-Driven R&D), Japan Society and Technology Agency
1 November 2011–31 March 2015

— Hydrospheric Environment Analytical Chemistry —

Sohrin, Y.
Ocean Section Study in the Pacific Ocean, Indian Ocean and Japan Sea Using Multielemental Analysis of Trace Metals
Grants-in-Aid for Scientific Research (A)
1 April 2012–31 March 2015

Sohrin, Y.
Development of a New Automated System for Preconcentration of Heavy Metals to Assess the Influence of Biology and Its Application to Oceanographic Study
Steel Foundation for Environmental Protection Technology
1 November 2011–31 October 2013

Murayama, M. (Investigator: Sohrin, Y.)
Reconstruction of Redox Conditions in Meedee Lake, Mediterranean, Sediment Core Using Molybdenum/Tungsten Ration
Grants-in-Aid for Scientific Research (C)
1 April 2010–31 March 2013

— Solution and Interface Chemistry —

Hasegawa, T.
Structural Analysis and Control of an Organic Thin Film of Solar Cell Using MAIR Spectroscopy
Grant for Basic Science Research Projects, Sumitomo Foundation
1 November 2012–30 November 2013

Hasegawa, T.
Operando Analysis of Concentration and Diffusion of Negatively-Adsorptive Chemical Species in A Monolayer Formed at an Air/Water Interface
Grants-in-Aid for Scientific Research on Innovative Areas "Molecular Sciences of Soft Interface"
1 April 2011–31 March 2013

Matubayasi, N.
Free-Energy Analysis of ATP hydrolysis
Grants-in-Aid for Scientific Research on Innovative Areas "Hydration and ATP Energy"
1 December 2008–31 March 2013

— Molecular Microbial Science —

Kurihara, T.
Functional Analysis and Application of Phospholipids Containing Polyunsaturated Fatty Acids in Bacterial Cell Membrane
Grants-in-Aid for Scientific Research (B)
1 April 2012–31 March 2015

Kurihara, T.
Exploration of Cold-Adapted Microorganisms for Development of New Low-Temperature Biotechnological Processes
Grants-in-Aid for Scientific Research (B)
1 April 2010–31 March 2013

Kurihara, T.
Development of Biocatalysts for Remediation of Environments Polluted with Persistent Organohalogen Compounds
Grants-in-Aid for Challenging Exploratory Research
1 April 2012–31 March 2014

Kawamoto, J.
Exploration of Functional Metal-Nanoparticle-Producing Bacteria from Extreme Environments
Grants-in-Aid for Scientific Research (B)
1 April 2012–31 March 2015

Kawamoto, J.
Synthesis of Functional Metal Nanoparticles by Using Metal-Metabolizing Bacteria
Grants-in-Aid for Challenging Exploratory Research
1 April 2011–31 March 2013

DIVISION OF MULTIDISCIPLINARY CHEMISTRY
— Polymer Materials Science —

Kanaya, T.
Non-equilibrium Intermediate States and Polymer Crystallization–Towards Establishment of Basis for Industrial Application
Grants-in-Aid for Scientific Research (A)
1 April 2012–31 March 2017

Nishida, K.
Property Control of Water-soluble Cellulose Derivatives
Grants-in-Aid for Scientific Research (C)
1 April 2011–31 March 2014

— Molecular Rheology —

Watanabe, H.
Nonlinear Feedback between Phase Growth and Chain Dynamics in Polymer Blends
Grants-in-Aid for Scientific Research (A)
1 April 2012–31 March 2015

Masubuchi, Y.
Relaxation of Polymer Chain under Flow
Grants-in-Aid for Scientific Research (B)
1 April 2011–31 March 2014

Matsumiya, Y.
Molecular Interpretation of Cooperative Length of Polymer Segment
Grants-in-Aid for Scientific Research (C)
1 April 2012–31 March 2015

— Molecular Aggregation Analysis —

Yoshida, H.
Inverse-Photoemission Spectroscopy with Zero Kinetic Energy Electrons for Measuring the Unoccupied Electronic States of Organic Semiconductors
PRESTO (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 October 2009–31 March 2013

ADVANCED RESEARCH CENTER FOR BEAM SCIENCE
— Laser Matter Interaction Science —

Sakabe, S.
Demonstration of Ultra-fast Electron Diffraction Using Fast Electrons Accelerated in Plasmas by an Intense Femtosecond Laser
Grants-in-Aid for Scientific Research (S)
1 April 2011–31 March 2016

Sakabe, S.
High Energy Electron Gun of a Fine Wire Driven by an Intense Femtosecond Laser
Grants-in-Aid for Challenging Exploratory Research
1 April 2010–31 March 2012

Sakabe, S.
Development of Single-shot Ultrafast Electron Diffraction Using Femtosecond Electron Pulses Generated by an Ultra Intense Short Pulse Laser
The Mitsubishi Foundation
1 October 2012–30 September 2013

Sakabe, S.
Demonstration of Ultra-fast Electron Diffraction Using Fast Plasma Electrons Produced by an Intense Femtosecond Laser
Yamada Science Foundation
1 April 2010–31 March 2012

Hashida, M.
Amorphous Metal Thin Film with the Surface of Periodic Nano-Structures Self-Formed by Femtosecond Laser Pulses
Grants-in-Aid for Scientific Research (C)
1 April 2010–31 March 2013

Tokita, S.
Ultrafast Observation of Relativistic Laser-plasma Interactions Using Femtosecond Electron Beams
Grants-in-Aid for Scientific Research (C)
1 April 2012–31 March 2015

Tokita, S.
Development of Short-pulse Intense Laser Technology in Mid-Infrared Fluoride Fiber Lasers
Grants-in-Aid for Young Scientists (B)
1 April 2010–31 March 2012

— Electron Microscopy and Crystal Chemistry —

Kurata, H.
Advanced Characterization Nanotechnology Platform at Kyoto University
Nanotechnology Platform Project, Ministry of Education, Culture, Sports, Science and Technology
2 July 2012–31 March 2022

INTERNATIONAL RESEARCH CENTER FOR ELEMENTS SCIENCE
— Organic Main Group Chemistry —

Nakamura, M.
Development of Selective Organic Synthesis Based on Iron Catalysis
Funding Program for Next Generation World-Leading Researchers (NEXT Program)
1 March 2011–31 March 2014

Takaya, H.
A Comprehensive Research on Iron- and Nickel-Catalyzed Organic Reactions: Development of New Catalyst, New Reactions, New Spectroscopic Methods
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 April 2011–31 March 2016

Takaya, H.
New Catalyst toward Biorefinery of Lignins Based on Metal-Conjugate Amino Acids and Peptides
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 April 2011–31 March 2016

Hatakeyama, T.
Synthesis of Helical π-Conjugated Molecules toward Next Generation Semiconductors
PRESTO (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 October 2011–31 March 2015

Hatakeyama, T.
Synthesis of Heterographene Derivatives by Tandem Hetero-Friedel-Crafts Reactions
Grants-in-Aid for Young Scientists (A)
1 April 2011–31 March 2014

— Advanced Solid State Chemistry —

Shimakawa, Y.
Exploring for New Functional Materials with Unusual Ionic States and Coordinations
Creation of Innovative Functions of Intelligent Materials on the Basis of the Element Strategy
1 April 2011–31 March 2016

— Organotransition Metal Chemistry —

Ozawa, F.
Synthesis and Catalytic Properties of Stimulus-responsible Transition Metal Complexes Bearing Low-coordinate Phosphorus Ligands
Grants-in-Aid for Scientific Research on Innovative Areas "Stimuli-responsive Chemical Species for the Creation of Functional Molecules"
1 April 2012–31 March 2017

Ozawa, F.
Development of Highly Efficient Catalysts for the Synthesis of π-Conjugated Polymers via Direct Arylation
ACT-C (Advanced Catalytic Transformation Program for Carbon Utilization), Japan Science and Technology Agency
1 October 2012–31 March 2018

Wakioka, M.
Development of Living Polymerization Based on Direct Arylation
Grants-in-Aid for Young Scientists (B)
1 April 2012–31 March 2015

— Photonic Elements Science —

Kanemitsu, Y.
Microscopic Spectroscopy of Highly Excited State in Semiconductor Nanostructures and Exploring Novel Optical Functionality
Grants-in-Aid for Scientific Research on Innovative Areas "Optical Science of Dynamically Correlated Electrons"
13 November 2008–31 March 2013

Kanemitsu, Y.
Evaluation of Nonradiative Carrier Recombination Loss in Concentrator Heterostructure Solar Cells
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 October 2011–31 March 2017

Tayagaki, T.
Controlling of the Many-body Interaction between Photoexcited Carriers toward Hot Carrier Solar Cells
PRESTO (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 October 2009–31 March 2013

BIOINFORMATICS CENTER
— Chemical Life Science —

Goto, S.
Key Technology Development for Data Integration and Application to Emerging Fileds
Life Science Database Integration Project, Japan Science and Technology Agency
1 April 2011–31 March 2014

Kanehisa, M.
Genome-based Integrated Resource of Diseases, Drugs, and Environmental Substances
Life Science Database Integration Project, Japan Science and Technology Agency
1 April 2011–31 March 2014

— Mathematical Bioinformatics —

Akutsu, T.; Kawabata, T.; Nagamochi, H.; Hayashida, M.
An Approach to Novel Structural Design by Combining Discrete Methods and Kernel Methods
Grants-in-Aid for Scientific Research (A)
1 April 2010–31 March 2015

Akutsu, T.
Discrete Model-Based Methods for Control of Complex Biological Systems
Grants-in-Aid for Challenging Exploratory Research
1 April 2010–31 March 2013

— Bio-knowledge Engineering —

Mamitsuka, H.
Estimating Data Structures from Various Semi-Structured Data
Grants-in-Aid for Scientific Research (B)
1 April 2012–31 March 2015

Natsume, Y.
In Silico Analysis of Histone Modification Dynamics that Regulate Developmental Processes
PRESTO (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 October 2010–31 March 2015

ENDOWED RESEARCH SECTION
— Nano-Interface Photonics (SEI Group CSR Foundation) —

Yamada, Y.
Study of Photovoltaic Effects and Photocarrier Recombination Dynamics Driven by Spontaneous Polarization in Ferroelectric Semiconductors
Grants-in-Aid for Young Scientists (B)
1 April 2012–31 March 2014